

ABSTRACT OF THE INVENTION

Methods and apparatus are provided for an electronic device having an autonomous memory checker for runtime security assurance. The autonomous memory checker comprises a controller, a memory reference file coupled to the controller, and an authentication engine coupled to the controller. A check is performed during runtime operation of the electronic device. The autonomous memory checker generates runtime reference values corresponding to trusted information stored in memory. The runtime reference values are compared against memory reference values stored in the memory reference file. The memory reference values are generated from the trusted information stored in memory. An error signal is generated when the runtime reference values are not identical to the memory reference values thereby indicating that the trusted information has been modified.